

7. Gulf of Alaska Flathead Sole (Executive Summary)

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November 2006

7.1 Introduction

Flathead sole has been moved to a biennial stock assessment schedule to coincide with new survey data. On alternate (even) years we will present an executive summary with last year's key assessment parameters and projections for this year. A discussion at the September 2006 Groundfish Plan Team meetings concluded the following two important points for updating information in off-year assessments:

- 1) Anytime the assessment model is re-run and presented in the SAFE Report, a full assessment document **must** be produced.
- 2) The single-species projection model **may** be re-run using new catch data without re-running the assessment model.

Therefore, as opposed to 2005, we will not be running the model with updated catch information, but will run the single-species projection model with the updated catch information and present those results with last year's projection results. This projection is based on the 2005 model results. For further information about the model, last year's full stock assessment is on the web (Stockhausen et al. 2005, <http://www.afsc.noaa.gov/refm/docs/2005/GOAflathead.pdf>).

7.2 Updated catch and projection

Flathead sole is in Tier 3a. The only new information that is updated in the projection is the 2005 catch (2,530 t) and the best estimate of the 2006 catch (2,644 t as of Sept. 23, 2006). For the 2007 fishery, we recommend the ABC of 39,110 t from the updated projection. This ABC is similar to last year's recommended ABC for 2007 of 39,196 t. The corresponding reference values for flathead sole are summarized below. The stock is not overfished, nor is it approaching overfishing status. The primary reference values are shown in the following table, with the recommended values in bold:

	Last year's projection-not updated		This year's projection-updated	
	2006	2007	2007*	2008
$B_{40\%}$ (t)	42,250	42,250	42,250	42,250
Female Spawning Biomass (t)	93,128	96,618	96,425	100,195
F_{ABC} (maximum allowable= $F_{40\%}$)	0.359	0.359	0.359	0.359
F_{OFL} ($F_{35\%}$)	0.463	0.463	0.463	0.463
$ABC_{F40\%}$ (t yield at $F_{40\%}=F_{max}$)	37,820	39,196	39,110	41,104
OFL(t, yield at $F_{35\%}$)	47,003	48,763	48,658	51,146

7.3 Area Apportionment

The recommended apportionment percentages are identical to last year, because there is no new survey information. The following table shows the recommended apportionment for 2007:

			West	Southeast	Total
	Western	Central	Yakutat	Outside	
Area Apportionment	27.9	66.6	5.3	0.1	100
Area ABC (t)	10,908	26,055	2,091	57	39,110

7.4 Research Priorities

Additional age data should improve future stock assessments by allowing improved estimates of individual growth and age-length transition matrices, and by filling in missing years with age composition data. Otoliths collected from both the groundfish survey and the fishery are being processed to expand the amount of age data available to incorporate in the assessment.

The assessment model is being revised to incorporate length-based approaches to fishery and survey selectivity, as well as alternative forms for the selectivity function in addition to the standard logistic function. The utility of potential environmental predictors of recruitment or catchability (e.g., temperature) is also being investigated.

7.5 Summaries for Plan Team

Species	Year	Biomass ¹	OFL ²	ABC ²	TAC ²	Catch ²
	2005	292,099	56,500	45,100	10,390	2,530
Flathead	2006	295,676	47,003	37,820	9,077	2,644
sole	2007	297,353	48,658	39,110		
	2008	297,757	51,146	41,104		

¹Total biomass from the age-structured model (2005) or projection model (2006-2008). ²As published in the Federal Register (2005, 2006) or as recommended based on the projection model (2007, 2008). ³As of Sept. 23, 2006.

Stock/ Assemblage	Area	2006				2007		2008		
		OFL ¹	ABC ¹	TAC ¹	Catch ³	OFL	ABC	OFL	ABC	
	W	--	10,548	2,000	436		10,908		11,464	
	C	--	25,195	5,000	2,207		26,055		27,382	
Flathead sole	WYAK	--	2,022	2,022	1		2,091		2,198	
	SEO	--	55	55	0		57		60	
	Total		47,003	37,820	9,077	2,644	48,658	39,110	51,146	41,104

¹As published in the Federal Register. ²As of Sept. 23, 2006.

Note: Tables of ABCs, OFLs, and TACs published in the Federal Register are available for:

2005: http://www.fakr.noaa.gov/sustainablefisheries/specs05_06/goatable1.pdf

2006: http://www.fakr.noaa.gov/sustainablefisheries/specs06_07/goatable1.pdf